

Summary of the Book

This book argues that sustainable economics will be transformed into a natural science, measurable with a clarity approaching that of physics. It guides the reader through a sequence of careful intellectual steps toward a compact conclusion: sustainable economics rests on two scientific principles.

Core Principles

1. Definition of the Discipline

Economics is the study of the relationship between the energy we expend to change our environment and the energy we receive back from those changes.

2. The Single Imperative: Sustainability

The energy returned should be minimally equal to the bodily energy expended and sufficient to allow nature to regenerate from the alterations we have made.

Stages in the Argument

The argument proceeds in stages, beginning with definition of Economics and moving through conceptual development, measurement, and implications for policy and practice. Its focus is human and ecological well-being.

Initial Definition of Universal Economics

Economics is introduced as the study of the production of wealth.

Wealth

Wealth is defined as the combination of **pleasure**, **empowerment** (its intensity), and **longevity** (its duration). Pleasure appears through sensation, creativity, sociability, and relaxation. While pleasure is primarily registered in sentience, it is also be reflected in physical health. The book observes that evolutionary processes align pleasure with physical well-being; this alignment matters for sustainability.

Wealth only comes into existence at the point of consumption. Owning property is not wealth; ownership makes one rich, which is control of distribution of items necessary for wealth production in consumption. The relationship between being rich and the production of wealth can be complex.

Measurement in Economics

We measure to maximise wealth production. Measurement should enable clearer analysis, comparison of plan outcomes, and more accurate prediction.

Need for Change

Current metrics based on price lack accuracy across important categories because:

- National wealth accounting often omits non-monetised transactions that can represent up to half of economic activity, and when monetary transactions are counted accounts fail to distinguish those that produce wealth from those that cause harm.
- Measures of inflation treat the value of money as a “bendy ruler” and largely ignore non-monetary exchange, substantial personal tax expenditures, and shifts in the wealth creating capacity of goods and services.
- Modern price theory has never separated money’s use to produce wealth from its capacity to impoverish; the origin of the latter being traced to the weaponisation of money circa 2000 BCE.

Consequently, theories and predictions founded primarily on price are often poorly tested, sometimes untestable, and liable to cause unintended harm to well-being. The book argues that this situation developed, in part, because of the global north experience of vast inflows of stolen wealth during colonial expansion diminishing the need for development of rigorous measurement.

Toward a More Accurate Metric

Science can offer an alternative metric, but applying scientific method to economics requires separating emotionally driven and imaginative decision-making from the strictly physical aspect of implementing such decisions. The book makes that separation explicit.

Political Economics and Pure Economics

- Political Economics concerns planning: deciding what to produce, how much, and for whom.
- Pure Economics concerns implementation: the physical actions by which such plans are carried out.

Pure Economics only studies physical phenomena. Implementing plans solely involves moving things—pulling things apart, pushing things together – which can be monitored by changing energy states. Thus all activities in Pure Economics are measurable in joules of energy.

This re-conceptualisation produces a second revolution: production, distribution (markets), and consumption become comparable in the same unit of measurement with their only differentiation being location - production and distribution taking place outside the skin; consumption taking place within and although consumption has two forms, direct and indirect, the former coming into being in forms of ingestion and the latter through protection or enhancement of internal bodily processes by bodily proximity of material artifacts, both are measured as consequent energetic changes inside our skin.

From a measurement standpoint this removes the classical distinction between value in use and value in exchange and removes the need for subjectivism in pure economics .

A single scientific unit therefore suffices to compare all economic processes accurately.

Sustainable Economics

Sustainable economics rests on the principle of returning people and nature to states at least as good as those prior to economic activity. Everything in economics can be expressed as energy used and energy replaced; and in sustainability, minimally, energy used must be matched by energy replaced.

Treating Pure Economics as the balanced use and replacement of energy applies equally to environment and people.

Levels of Analysis

Using the joule as a standard could, in principle, measure economic phenomena down to the atomic level, though this is presently impractical. As a pragmatic alternative, the book proposes moving from mechanics to chemistry for many applications, and in human terms suggests nutritional science as a useful analogue for measuring economic sustainability in people. Environmental science serves as an equivalent for ecosystems. Because the underlying physical processes are the same, human and environmental activity can be represented and measured in a common framework, improving comparability, analysis, and prediction.

The book also argues that some activities initially classed as consumption should be treated as production, and vice versa, once energy flows are accounted for.

Dimensions of Analysis

To enrich analysis the book adds levels beyond micro, macro, and global:

- Microscopic: contributions of individual people.
- Solar: the role of solar energy input.
- Stella: focus on planetary substance and processes of creation and loss.

Examining factors of production shows they are all forms of labour; this allows accurate measurement of sustainable levels for profits, tax, interest, rent, and wages.

The book points out that payments that insure against enterprise failure take different forms for different factors. It further clarifies that the choice of insurance mechanism is a question for Political Economics whilst the measurement of their efficiency in implementation is a matter for Pure Economics.

Competing ideologies are welcomed as generators of alternative plans (hypotheses about expected outcomes), while measurement provides the rigorous means to test those hypotheses. The book surveys organisational forms and stresses that each responds to particular environmental conditions.

Capital and Capitalism

Capital is understood as saving of resources to pay for work that does not directly produce food. Capital formation evolves in three stages:

1. Unconscious reflex biological and genetically recorded forms (for example fat reserves used to power tool making).

2. Conscious decisions to support non-food producing occupations—administration, defence, communal infrastructure, religious advising, trade.
3. Commodity capitalism, where increased invention directs much activity toward non-directly consumable production and extensive trade.

This third stage coincides historically with European colonial expansion, during which what might have been a sustainable extension of wealth production became entangled with economic and military systems designed to plunder lands and bodies of largely people of colour.

This led to the common misconception of the origin of modern economics centring around Adam Smith's concept an invisible hand as a process by which market supply and demand 'magically' adjusted producers' selfish motivation into wealth for all. Sadly, the more accurate interpretation is an invisible hand in the pocket of largely people of colour that produced such vast unearned riches that the magic of the market place was little more someone else paying for its inefficiencies.

Planning

Complex economies are seen to require planning that mixes central direction, local planning at the point of production, and responsiveness to consumer wishes. The balance among these modes shifts across time and place; the effectiveness of any mix is a question for scientific measurement.

Sustainability calculations are, at base, a zero-sum tests: for both the environment and people, the energy gained in consumption must at minimum replace the energy used in production and distribution. All outputs must be balanced by subsequent inputs.

Throughout, Pure Economics is framed as the study of energy movements between kinetic and potential forms. This perspective moves economic inquiry toward the precision of classical physics.

Takeaway

- Economics will become a natural science alongside physics and chemistry.
- The joule will become its basic metric.
- This shift will enable three revolutions:
 - the ability to measure production, distribution, and consumption with a single metric;
 - the ability to measure human and environmental change in the same metric;
 - a vast increase in the accuracy of economic measurement and prediction.

Economics has the potential to be thousands of times more accurate than at present.

Addendum

The coming revolution in economics is assisted by advances in non-invasive measurement of bodily and environmental states, a field progressing rapidly.

For the full explanation see the book:

[Fix the World – Amazon
PDF](#)

or

[a PWYW PDF version](#)

or

[A Reveiw](#)